



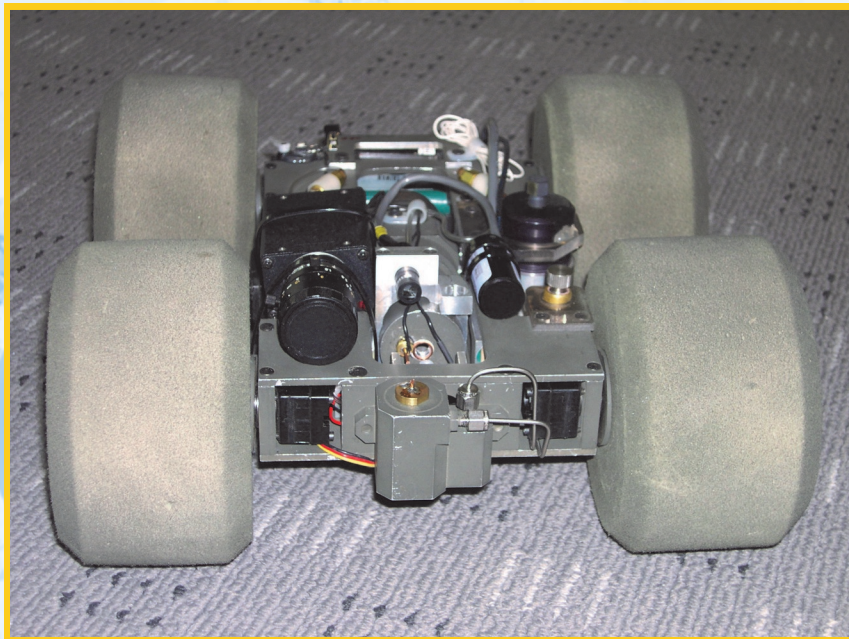
Sandia National Laboratories

# Method for Reducing Background Clutter In a Camera Image

## Summary

Sandia has developed an eye-safe, robust, lightweight, and low-cost 3D structured lighting sensor for use in broad daylight outdoor applications. This newly developed sensor overcomes the current limitations of laser-based 3D sensors and can help with threat assessment for first responders, crime scene investigation, and any other scenario which requires accurate 3D mapping.

Currently available laser scanners are slow, bulky and heavy, expensive, fragile, short-range, sensitive to vibration, and unreliable for outdoor use in bright sunlight conditions. The technology developed by Sandia overcomes these limitations and contributes to the realization of intelligent machine systems reducing manpower.



Structured lighting concept demonstrated on a robotic vehicle.

## BENEFITS

- Eye-safe, robust, low cost, and lightweight
- Vast overall improvement on existing 3D mapping technology
- Unlike currently available technology, this sensor is eye-safe
- Overcomes the limitations of current laser-based 3D sensors

## APPLICATIONS

- Outdoor 3D mapping
- First responder threat assessment
- Crime scene investigation
- Surveillance and Reconnaissance
- Part inspection
- Damage Assessment
- Construction and maintenance

## U.S. PATENTS ON SD# 10018

- 7742640

## INTELLECTUAL PROPERTY & LICENSING CONTACT

Virginia Cleary

505.284.8902

[vdclear@sandia.gov](mailto:vdclear@sandia.gov)

## Licensing & Partnering Status:

Various license and partnering options are available. Please contact the Intellectual Property department to discuss.

## Technology Readiness Level:

Sandia estimates this technology's TRL at level 5. Key elements of the technology have been demonstrative in relevant environments.



Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.  
SAND #2010-6902P



**Sandia  
National  
Laboratories**